

REMARKS

Claims 1, 8, 9, 15-17, 121, 122, 170 and 171 are rejected under 35 U.S.C. 102(b) as being anticipated by Wu, et al.

Claims 2, 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, et al. in view of Poirier.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, et al. in view of Andersson.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, et al. in view of Brandestini, et al.

Claims 7, 19-74, 124-146 and 173-192 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, et al.

Claims 10, 18 and 98-120 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, et al. in view of Andreiko, et al. (238).

Claims 11-14, 75-97, 123, 147-169 and 172 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, et al. in view of Andreiko, et al. (243).

Applicant respectfully requests reconsideration and withdrawal of these rejections.

Applicant thanks the Examiner for the Interview accorded him on February 8, 2001.

Applicant discussed the rejections and the differences between the invention and the cited art.

Regarding the rejection of claims 1-120 under 35 U.S.C. 101, Applicant has amended each of independent claims 1, 75, and 98 to include the feature of "scanning the patient's dentition, or a physical model thereof." Regarding the rejection of claims 121-192 under 35 U.S.C. 101, Applicant has amended each of independent claims 121, 147, and 170 to include the feature of "causing the patient's dentition, or a physical model thereof, to be scanned." As discussed during the Examiner Interview, Applicant respectfully submits that this amendment limits the claimed invention to a practical application in the arts, in accordance with the Software Examination Guidelines.

Further regarding the rejection of claims 121-192 under 35 U.S.C. 101, the Examiner asserts that the claim preamble does not recite a "computer-readable medium." Applicant has

amended the preamble of each of independent claims 121, 147, and 170 to include "A computer program, tangibly stored on a computer-readable medium."

The remaining claims each depend, directly or indirectly, from one of the independent claims.

For at least these reasons, Applicant requests that the rejection of claims 1-192 under 35 U.S.C. 101 be reconsidered and withdrawn.

Regarding the rejections of the claims under 35 U.S.C. 102(b) and 35 U.S.C. 103(a), Applicant has amended each of the independent claims to recite that the computer applies the test without human intervention. This feature is also found in dependent claims 15 and 122. Applicant notes the importance of the automated nature of the segmentation operation of the claimed invention. Implementations of the invention include "several computer automated techniques for subdividing, or segmenting, a digital dentition model into models of individual dentition components" (see Applicant's specification at page 2, lines 1-2). One such technique includes "feature skeleton" analysis (see page 6, beginning at line 13). Another such technique includes "2D slice analysis" (see page 8, beginning at line 11). Yet another such technique includes "arch curve fitting" (see page 11, beginning at line 10). Still another such technique is described at page 14, beginning at line 22.

Applicant further notes that the segmentation techniques include both human assisted and fully automated techniques. Some of the human assisted techniques allow a human user to provide "algorithmic hints" by identifying certain features. The identified features then serve as a basis for automated segmentation. (See Summary.)

The remaining claims each depend, directly or indirectly, from one of the independent claims.

For at least these reasons, Applicant requests that the rejections under 35 U.S.C. 102(b) and 35 U.S.C. 103(a) be reconsidered and withdrawn.

Claims 1-192 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over certain claims of copending Application No. 09/169,276. Applicant notes that Application No. 09/169,276 has been abandoned in favor of continuing Application No. 09/686,190. Applicant will address this

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provisional rejection when the Examiner has identified allowable subject matter in the instant application.

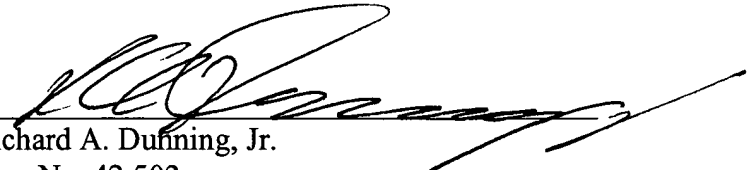
Applicant respectfully submits that the cited art, alone or in combination, neither teaches nor suggests automated segmentation. For at least these reasons, Applicant requests that the rejection of claims 1-192 under 35 U.S.C. 102(b) and 35 U.S.C. 103(a) be reconsidered and withdrawn.

Applicant submits that all of the claims are now in condition for allowance, which action is requested. Filed herewith is a Petition for Automatic Extension with the required fee. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: \_\_\_\_\_

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